

# Dashboard Program Review Document



*Last updated September 10, 2013*

- Dashboard Program Overview

- Department/Agency Statuses

- Additional Software Needed



# The Dashboard Program has 6 primary objectives that will be achieved through a specific plan of action



■ Primary

## Dashboard Program objectives

- 1 Increase operational efficiency
- 2 Eliminate wasteful and unnecessary spending
- 3 Identify opportunities for increasing revenue
- 4 Address inadequate service offerings
- 5 Improve communication and transparency
- 6 **Significantly improve quality of services**

## Dashboard Program “Plan of Action”

- 1 Establish deep understanding of department functions, operations, capacities, and abilities
- 2 Gather and record sufficient<sup>1</sup> data on all department operations and activities
- 3 Create an automated, systematic data recording and analysis tool<sup>2</sup>
- 4 Collaborate with directors and other personnel in taking responsibility for Dept./Agency actions
- 5 **Revise strategy through comprehensive analysis of Dashboard Program data**

1: Some departments and agencies have previously collect some data but this data often does not contain enough richness (detail and depth) to allow for sufficient analysis

2: Currently excel based models that provide a mechanism to analyze data sets

# Each Jersey City Department/Agency has an independent Dashboard Program “Tool”



## Sample view of a Dashboard Tool

City of Jersey City  
Mayor Fulop's Data Dashboard v2.0

FIRE DEPARTMENT (FDJC)						
Prepared By:					Week:	
Approved By:					Week #:	
LAST MODIFIED:						
Service Calls	Battalion 1		Battalion 2		Battalion 3	
	Calls	Units	Calls	Units	Calls	Units
Private Dwellings						
Apartments						
Hotels and Motels						
All Other Residential						
<b>TOTAL RESIDENTIAL</b>						
Public Assembly						
Schools and Colleges						
Health Care and Penal Institutions						
Stores and Offices						
Industry, Utility, Defense, Labs, Manuf.						
Storage in Structures						
Other Structures						
<b>TOTAL STRUCTURE FIRES</b>						
Highway vehicles						
Other Vehicles						
Outside of Structures with value, not vehic.						
Brush, Grass, Wildland, (No Value)						
Rubbish, Dumpsters (No Value)						
All Other Fires						
<b>TOTAL FIRES</b>						
Emergency Medical Responses						
Other Rescue						
Hazardous Materials						
Other HazMat Responses						

## Tool overview

- Currently based in Excel<sup>1</sup>
- Working document created in-house
- Heavily customized for each department
- Utilizes department reported data
- Updated by department personnel<sup>2</sup>

To minimize manual data entry, we are looking for automated exports from existing data systems

## Tool data contents

- Weekly/monthly department activity log
- Quarterly equipment inventory
- Quarterly personnel records<sup>3</sup>
- Productivity analysis
- Geographic breakdown (ward, zone, etc.)

- 1: Allows for ease of high-frequency editing while in planning phases; software based system is long term goal
- 2: Inventory and personnel data updated quarterly; some departments may only require monthly reporting; up to 2 additional team members (in addition to department/agency directors) have been designated to collect data for dashboards
- 2: City departments will utilize payroll system for personnel analysis



FIRE DEPARTMENT (FDJC)									
Prepared By:					Week:				to:
Approved By:					Week #:				
								PRODUCTIVITY	
Service Calls	Battalion 1		Battalion 2		Battalion 3		Battalion 4		
	Calls	Units	Calls	Units	Calls	Units	Calls	Units	
Private Dwellings									
Apartments									
Hotels and Motels									
All Other Residential									
<b>TOTAL RESIDENTIAL</b>									
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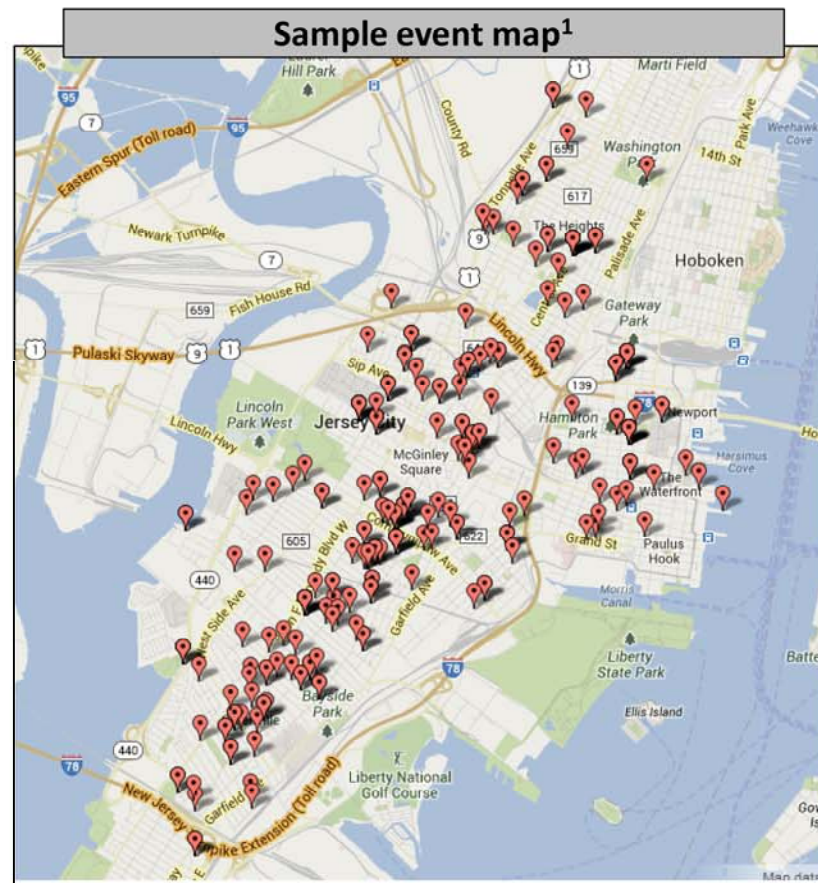
# The Dashboard Program will lead to better public visibility and accountability of Jersey City services

## Sample Dashboard Program outputs

### Edmonton, Canada Open Data Catalogue



### Baltimore CitiStat



1: First 250 JCPD service calls, June 1 2013 (provided as an example of “geo-locating” of events and not intended to show any analysis)

SOURCE: Batchgeo.com; data.baltimorecity.gov; <https://data.edmonton.ca/dashboard>



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# Most Jersey City Departments and Autonomous Agencies have not previously utilized a sufficient system for data recording and analysis

## Status before Dashboard Program

	Previously collected sufficient data	Utilize satisfactory data collection software/system <sup>1</sup>	Previously used data to drive decision making
City Dept.			
Auton. Agency			
Dept. @City Hall			
DPW			
Law			
Recreation			
HHS			
Police			
Fire			
HEDC			
OEM			
EDC			
Housing			
JCIA			
MUA			
Parking			
Library			
Redevelopment			
RRC			
BA			

## Sample initial challenges (*not exhaustive*)

- Fire Dept. and Parking Authority can only create **paper copies of reports** (must print out and then manually type into excel)
- Department of Recreation did not have a centralized file containing all participants or have standardized attendance procedures
- OEM had **not yet performed a full inventory**
- Many departments **never recorded** a wide variety of department operations and functions
- Microsoft Excel and other electronic data recording tools are vastly underutilized by most departments<sup>2</sup>, and some instead have been using **note cards, notebooks, etc.**

**Despite data collection challenges, Directors see the long term value in this program and feedback has been positive**

1: While some departments have collected data, some of this data is not readily available for export/analysis

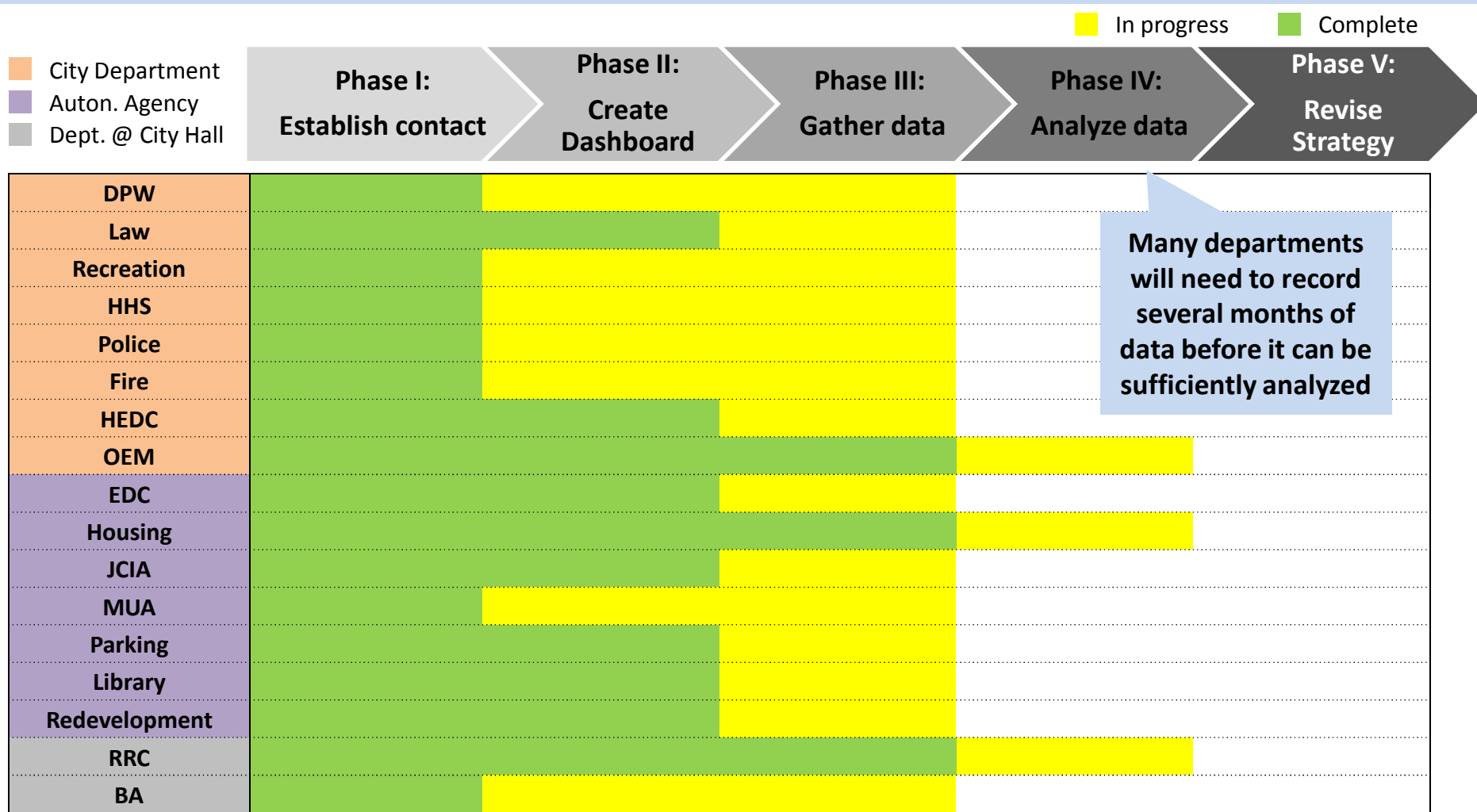
2: Many Jersey City personnel do not have sufficient training in using Excel and some computers do not even have this program installed





# 10 of 17 Departments/Agencies have finalized Dashboard templates, and 3 have submitted sufficient data

## Department progress



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## Two main Dashboard groups will result in two types of Dashboard outputs

### Event/project/attendance based

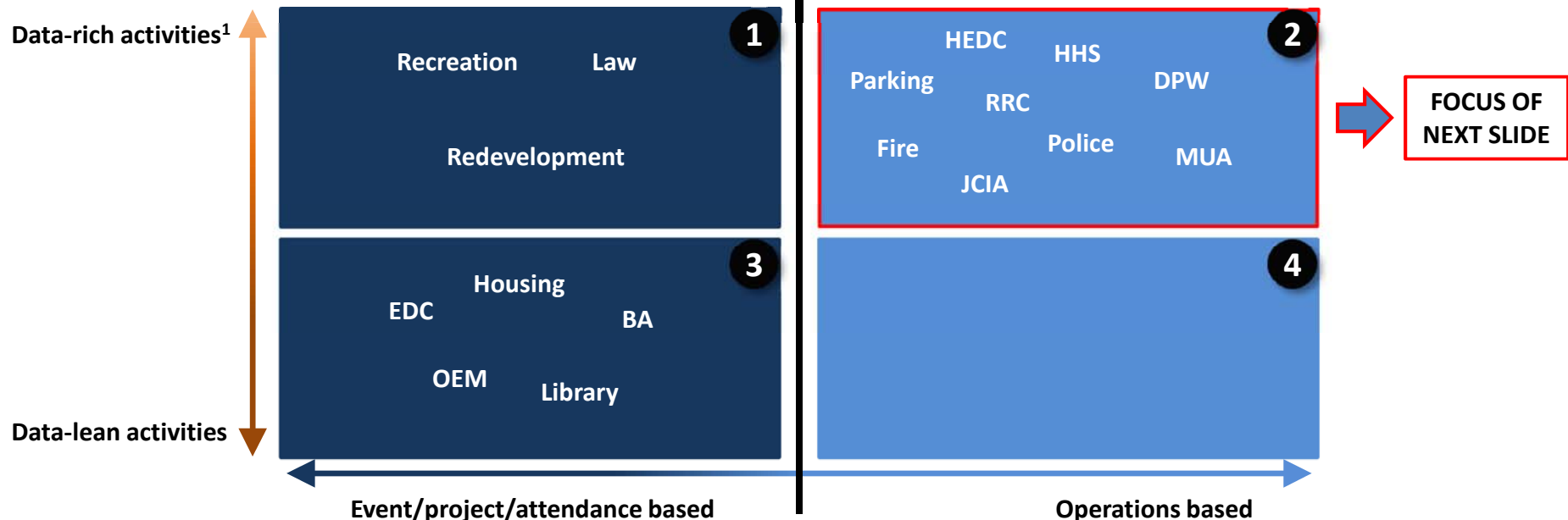
- Activities are primarily ongoing, long-term projects/events
- Data collection focused on updating project/event statuses (i.e. number of projects/events, attendees/users, etc.)
- Some activities may not have a strategy that can be revised

These Dashboards will serve to record events and projects, functioning primarily as a source of information and to communicate activity summaries

### Operations based

- Wide variety of short-term operations
- High frequency and shorter relative turnaround time activities
- Data collection requires “in the field” and real-time recording, utilizing considerable amounts of time/resources

These Dashboards will provide deep analysis of data leading to significant insight and opportunities to realign strategy



1: Each activity requires recording a long list of data points: i.e. address, time, manpower, type of incident, length of incident, resources , etc.



## Data-rich, operations based activities will benefit from customized software capable of recording data in real-time and “in the field”

### Manual data entry using excel is creating a massive personnel capacity burden

- Data-rich, operations based activities require recording of a long list of data points for every activity
- Most of these activities occur frequently, exponentially increasing time required to input data
- Traditional Dashboards using excel would require personnel to “return to base” and fill out paperwork after work is completed (or use a dispatcher dedicated to data entry as with JCMUA)

### Efficiency increases if data recording occurs within normal workflow process

- Available software can record all data “in the field” and in real-time, reducing time spent on data recording and time from activity completion to activity data recording
- Data recording that occurs within normal workflow will allow reallocation of data entry resources

### Real-time and “in the field” data recording minimizes human error

- Accuracy no longer relies on manual data recording systems (i.e. human memory, copying from one source to another, etc.)
- Automated data logging will be able to capture more granular data on activities

### Data analysis will be available to a larger audience at a faster rate

- Analyses no longer require the submission of a report/data file as data is available immediately<sup>1</sup>
- Analyses can update “on the fly” using real-time data
- Analyses not dependent on manual calculations in excel
- All users can create and/or view automated analyses

1: The most common type of delay experienced so far (locating late/missing data)



## We are asking the City Council to help us purchase additional software to improve Dashboard Program functionality

### Necessary software requirements

#### Data recording capabilities

- Full functionality **"In the field"**
- **Real time** data uploads
- **Within** normal department **workflow**
- **Asset mapping** (i.e. fire hydrants, sewer lines, trees, etc.)
- Produces **instantaneous analyses** to be viewed by Mayor's staff and/or the public

#### Additional features needed

- **Automated geocoding** (location mapping) of operations
- **Interface with GovQA** (request completion notification)
- **Allows for seamless data sharing between departments** (i.e. Fire Dept. can view building code inspections en route to emergency)

#### Applicable departments<sup>1</sup>

- HEDC (in progress)
- DPW/JCIA(priority)
- HHS (priority)
- Police
- Parking
- FIRE
- MUA

1: Not applicable to event/project based departments; the RRC already utilizes sufficient software; Parking still in discussions over feasibility with State mandated software programs

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